

### XP Scales:

$$1/384xp = 1/32''$$

$$1/192xp = 1/16''$$

$$1/128xp = 3/32''$$

$$1/96xp = 1/8''$$

$$1/64xp = 3/16''$$

$$1/48xp = 1/4''$$

$$1/32xp = 3/8''$$

$$1/24xp = 1/2''$$

$$1/16xp = 3/4''$$

$$1/12xp = 1''$$

$$1/8xp = 1 \frac{1}{2}''$$

$$1/4xp = 3''$$

$$1/120xp = 10'$$

$$1/240xp = 20'$$

$$1/360xp = 30'$$

$$1/480xp = 40'$$

$$1/600xp = 50'$$

$$1/720xp = 60'$$

### Conversions:

$$1 \text{ acre} = 43,560 \text{ sq. Ft.}$$

$$5,280 \text{ Ft} = 1 \text{ Mile}$$

### Stud Measurements:

$$8' \text{ Stud} = 7'-8 \frac{5}{8}''$$

$$1 \frac{1}{2}'' \text{ Bottom Plate}$$

$$3'' \text{ Top Plate}$$

$$\text{Total} = 8'-1 \frac{1}{8}''$$

$$9' \text{ Stud} = 8'-8 \frac{5}{8}''$$

$$1 \frac{1}{2}'' \text{ Bottom Plate}$$

$$3'' \text{ Top Plate}$$

$$\text{Total} = 9'-1 \frac{1}{8}''$$

### CMU Measurements:

Best to end in a 0" or 8" if foot # is even

Best to end in a 4" if foot # is odd

### Brick:

Vertically: 3 courses of brick plus mortar = 8"

Horizontal: 1 brick plus mortar = 8"

Mortar = 3/8"

## ELECTRICAL:

### Baseboard Heating:

To find amount of baseboard heat needed: take sq. ft. of room, multiply by 10, this gives you the amount of watts needed.

- 3' B.B. = 750 W
- 4' B.B. = 1000W
- 5' B.B. = 1250W
- 6' B.B. = 1500W
- 8' B.B. = 2000W
- 8' of B.B. = 6850 BTU
- 6' of B.B. = 5100 BTU
- 250 W per B.B. foot, can put 3600W (max) on 2P/20 amp

### Outlets:

- No outlets above baseboard heat
- Dryer is a two-pole outlet
- Outlet is needed in Kitchen where counter is more than 12" wide
- At corner, outlet must be within 2' on either side
- Outside receptacle at grade only
- Hall longer than 10' needs outlet
- Outlet needed on any wall 2' or longer
- Outlet needed within 6' of door
- Any outlet, phone and cable on shared, dividing walls shall be a min. of 2' apart
- Outlets above counters are 42" A.F.F.

### Wire Sizes:

(Measured in American Wire Gage)

20 amp or less	#12 AWG
30 amp	#10 AWG
40 amp	# 8 AWG
60 amp	# 6 AWG
80 amp	# 4 AWG
100 amp	#3 or 2 AWG

### Fans & Hoods:

Exhaust Fans = 80 CFM

Range Hoods = 250 CFM